I

RURAL DISTRICT OF MALMESBURY

WILTSHIRE

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

AND

CHIEF PUBLIC HEALTH INSPECTOR

FOR THE YEAR ENDED 31ST DECEMBER 1970.

PUBLIC HEALTH OFFICERS OF THE AUTHORITY.

(a) MEDICAL OFFICER OF HEALTH.

J.R. Wray, M.R.C.S., L.R.C.P., D.P.H.

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Also: Medical Officer of Health for the:

Boroughs of Calne, Chippenham, and Malmesbury and

The Rural District of Calne and Chippenham.

Medical Officer, Wiltshire County Council.

School Medical Officer.

(b) SECRETARY TO THE MEDICAL OFFICER OF HEALTH.

Mrs. V.L. Gregory.

(c) CHIEF PUBLIC HEALTH INSPECTOR AND SURVEYOR.

R.S. Pierce, Cert. S.I.B., Meat and Other Food Inspector's Cert.

(d) SENIOR ADDITIONAL PUBLIC HEALTH INSPECTOR.

R.T. Baynham, Cert. S.I.B., Meat and Other Food Inspector's Cert.
Smoke Inspector's Diploma, R.S.H.

(e) ADDITIONAL PUBLIC HEALTH INSPECTOR.

D. Peck, Cert. P.H.I.E.B., Cert. R.S.H., Meat and Other Food Inspector's Cert.

The Public Health Committee of the Council deals with all matters relating to Public Health.

The Chairman and Members of the
Malmesbury Rural District Council.

Mr. Chairman and Members,

I have pleasure in presenting my Annual Report for the year 1970 in accordance with the Public Health Officers Regulations, 1959.

In 1970 very little in the way of notifiable disease was reported, and the vital statistics for the District remain very favourable.

During the year a report appeared in the British Medical Journal of forty-four cases of liver fluke in persons who had eaten wild watercress in the Forest of Dean area. Another five human cases were reported from Shropshire. After making enquiries I discovered that the incidence of this disease in cattle is rising, so assume that if nothing is done there are likely to be more human cases in future. As I could find nothing in the medical literature about prevention of this disease in humans, I studied the matter and then contributed an article on the subject to the weekly journal "Medical Officer". I have given this as an appendix to my report.

As far as this District is concerned I found the snail carrier of liver fluke near wild watercress where the Sherston to Didmarton Road crosses the River Avon, and also in the Daniel's Well area near Malmesbury Borough. Having ascertained that the public had gathered watercress from these places in the past, I arranged with the farmers concerned for warning notice-boards to be erected.

I would like to thank the Council and its Officers for their help and support during the year.

I have the honour to be,
Your obedient servant,

John R. Wray.

Medical Officer of Health.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

GENERAL STATISTICS

Area (in acres)	57,705
Population (Registrar General's estimate)	11,480
Number of inhabited houses (end of 1970 according to Rate Book)	3,655
Number of Council dwellings (end of 1970)	636
Number of applicants for Council dwellings (end of 1970) ...	217
Rateable value	334,750
Sum represented by Penny Rate	1,326

VITAL STATISTICS

Birth and Death Rates as compared with other areas. (Births and Deaths per 1,000 population, standardised.*)

	Birth Rate		Death Rate	
	1969	1970	1969	1970
Malmesbury Rural District	19.3	18.5	10.3	10.7
Malmesbury Borough ...	17.5	15.4	10.4	14.9
Wiltshire	17.6	17.2	10.7	10.7
England and Wales ...	16.3	16.0	11.9	11.7

*Area comparability figures are supplied to each district by the Registrar General. These take into account the varying age/sex distribution of the population in different parts of the country. When applied to the local rates, they allow a more accurate comparison to be made between different areas.

Still Births.

One still birth was notified during 1970. The rate per 1,000 total live and still births is 5. The rate for England and Wales is given by the Registrar General as 13.

Infant Mortality.

Under 1 year of age	1
Infant mortality rate for the District (per 1,000 live births)	5
Comparative rate for England and Wales (per 1,000 live births)	18

Perinatal Mortality Rate.

This consists of still births and deaths under 1 week combined, per 1,000 total live and still births. The rate for the District was 10 compared with the rate for England and Wales which was 23.

Deaths - Analysis of Causes of Death.

	Males	Females	Totals:
Malignant neoplasm, buccal cavity etc.	1	-	1
Malignant neoplasm, oesophagus	1	-	1
Malignant neoplasm, stomach	1	1	2
Malignant neoplasm, intestine	-	1	1
Malignant neoplasm, lung, bronchus	6	2	8
Malignant neoplasm, breast	-	1	1
Maligannt neoplasm, uterus	-	2	2
Malignant neoplasm, prostate	1	-	1
Other malignant neoplasms	4	2	6
Benign and unspecified neoplasms	1	-	1
Hypertensive disease	2	-	2
Ischaemic heart disease	14	11	25
Other forms of heart disease	3	3	6
Cerebrovascular disease	8	10	18
Other diseases of circulatory system	1	1	2
Influenza	3	2	5
Pneumonia	2	-	2
Bronchitis and emphysema	4	2	6
Other diseases of respiratory system	1	-	1
Peptic ulcer	1	1	2
Intestinal obstruction and hernia	1	-	1
Other diseases of digestive system	-	1	1
Other diseases, genito-urinary system	-	2	2
Congenital anomalies	1	-	1
Symptoms and ill-defined conditions	1	-	1
Motor vehicle accidents	1	-	1
All other accidents	-	1	1
Suicide and self-inflicted injuries	-	1	1
Totals:	58	44	102

Deaths - By Age Groups.

	Males	Females	Totals:
Under 4 weeks			
Congenital anomalies	1	-	1
15 - 24 years			
Other malignant neoplasms	1	-	
Motor vehicle accidents	1	-	
	2	-	2
25 - 34 years			
Suicide and self-inflicted injuries	-	1	1
35 - 44 years			
Cerebrovascular disease	-	1	1

Deaths - By Age Groups. (Continued)

	Males	Females	Totals:
45 - 54 years			
Malignant neoplasm, lung, bronchus	-	1	
Other malignant neoplasms	1	-	
Ischaemic heart disease	4	1	
Cerebrovascular disease	2	-	
Other diseases of circulatory system	1	-	
Other diseases of respiratory system	1	-	
	9	2	11
55 - 64 years			
Malignant neoplasm, oesophagus	1	-	
Malignant neoplasm, lung, bronchus	1	1	
Malignant neoplasm, uterus	-	1	
Malignant neoplasm, prostate	1	-	
Benign and unspecified neoplasms	1	-	
Ischaemic heart disease	4	2	
Cerebrovascular disease	3	2	
Influenza	2	-	
Bronchitis and emphysema	2	-	
	15	6	21
65 - 74 years			
Malignant neoplasm, buccal cavity etc.	1	-	
Malignant neoplasm, stomach	1	1	
Malignant neoplasm, lung, bronchus	5	-	
Malignant neoplasm, breast	-	1	
Other malignant neoplasms	1	2	
Ischaemic heart disease	4	-	
Other forms of heart disease	-	1	
Cerebrovascular disease	-	3	
Bronchitis and emphysema	1	1	
Peptic ulcer	1	1	
Intestinal obstruction and hernia	1	-	
Other diseases, genito-urinary system	-	2	
	15	12	27
75 years and over			
Malignant neoplasm, intestine	-	1	
Malignant neoplasm, uterus	-	1	
Other malignant neoplasms	1	-	
Hypertensive disease	2	-	
Ischaemic heart disease	2	8	
Other forms of heart disease	3	2	
Cerebrovascular disease	3	4	
Other diseases of circulatory system	-	1	
Influenza	1	2	
Pneumonia	2	-	
Bronchitis and emphysema	1	1	
Other diseases of digestive system	-	1	
Symptoms and ill-defined conditions	1	-	
All other accidents	-	1	
	16	22	38

The main cause of death was again ischaemic (coronary) heart disease - 25 deaths compared with 23 in 1969. Eleven of these deaths took place in people under the retiring age of 65.

Cerebrovascular disease (strokes) were the next most common cause of death.

At the end of 1969 there was a sharp epidemic of influenza and this lead to five deaths in early 1970.

There were six deaths from chronic bronchitis and emphysema.

The most common cause of cancer death was lung cancer. Eight deaths from this condition occurred during the year. In other figures, 10% of all male deaths in the district during the year were due to lung cancer. A new report by the Royal College of Physicians entitled "Smoking and Health Now" gives clear evidence that cigarette smoking increases deaths from lung cancer, coronary heart disease and chronic bronchitis. From their studies over the years on people who have given up smoking they are able to estimate that if everyone gave up smoking the number of deaths from lung cancer would fall to one-tenth of its present rate. For the individual who gives up smoking there is a decreasing risk of dying from lung cancer for every year that passes. The risk was found to be halved in persons who had stopped for between one and five years, and in those who had stopped for fifteen years the risk becomes almost negligible (in actual fact, 0.2 deaths per 1,000, which compares with 0.1 deaths per 1,000 for life-long non-smokers). These hopeful figures apply even if a person has smoked for twenty years or more.

There is clear evidence that the more the number of cigarettes you smoke per day the greater the risk of dying from lung cancer. Figures for the United Kingdom show that someone who smokes 30 or more a day has a risk thirty times that of a non-smoker, 20 a day, twenty times the risk, and 10 a day about eight times the risk. Studies from America and Canada show a lower risk, and it is suggested that the higher British rate may be due to the British habit of smoking cigarettes to shorter stub length than the Americans, and to the greater exposure of the British to air polluted by domestic and industrial smoke.

If you are not yet ready to give up your addiction to smoking, then I advise you to use filter cigarettes and stub them out when they have burnt halfway down; in your ashtray you should see white stubs at least as long as the brown filter tip. This extra waste of money will well repay you in later years by far better health. If you change to cigar or pipe smoking only, this further reduces the risk.

Wiltshire County Council is willing to organise special clinics to help smokers to give up the habit entirely. If enough people write to the Health Department, County Hall, Trowbridge, they will arrange a clinic.

INFECTIOUS AND NOTIFIABLE DISEASES.

The following table gives the list of diseases notified during the year compared with the previous three years:

	1967	1968	1969	1970
Pulmonary tuberculosis	1	1	-	1
Measles	97	11	21	30
Infectious hepatitis	-	13	37	2
Scarlet fever	-	6	1	1
Whooping cough	4	4	4	-
Food poisoning	3	15	-	-
Dysentery	2	-	14	4

No case of diphtheria in children has been reported since 1953, and no case of poliomyelitis since 1958. This shows the value of immunisation. The County Medical Officer of Health has kindly provided figures to show that just over 89% of infants in the district are being immunised, which is a satisfactory figure for a rural district.

Tuberculosis.

One case was notified during the year. Routine surveillance of family and other contacts is carried out by the Chest Physician. The environmental aspects were investigated by the health inspector and found satisfactory.

Measles.

Thirty cases were notified. Immunisation against this potentially dangerous disease is offered to all children in their second year of life.

Infectious Hepatitis.

The outbreak which started in 1969 has now subsided as the population gained natural immunity. Only 2 cases were notified during the year.

Food Poisoning.

No cases of food poisoning were confirmed. There were some outbreaks of "epidemic vomiting", which is thought to be caused by a virus. Two households were investigated after attacks of vomiting, but the laboratory reports were all negative.

Dysentery.

All four members of a family of four were affected by sonne dysentery. Precautions were taken and it did not spread to anyone else.

Immunisation.

A new immunisation campaign was started during the year to protect all girls at secondary school against Rubella (sometimes called "German Measles"). This is a mild disease, but if contracted during the early months of pregnancy can damage the foetus so that if the child is born alive it is found to have congenital defects such as deafness, blindness, or a deformed heart. When it is known that the mother has been is contact with Rubella in pregnancy she can be given a protective serum. However, it may not always be known that she has contracted the disease, so it is far safer to give long-lasting protection in adolescence.

I am indebted to Dr. C.D.L. Lycett, the County Medical Officer of Health, for the following immunisation statistics for the Rural District during 1970:-

		Children born in years					1961 - 65	1955 - 60	OTHERS under 16
		1970	1969	1968	1967	1966			
Primary imms. completed during 1970	Diph.	84	85	7	1	2	8	2	-
	Wh. cough	84	85	6	1	1	1	-	-
	Tetanus	84	85	7	2	2	9	9	-
	Measles	-	71	48	20	9	8	1	-
	Polio.	83	83	6	1	1	4	-	-
Reinforcing imms. given in 1970	Diph.	-	37	56	11	47	64	2	-
	Wh. cough	-	34	51	9	2	11	1	-
	Tetanus	-	37	56	11	47	69	16	1
	Polio.	-	33	52	10	48	59	4	3

SMALLPOX

	Months.				Years.		
Age group	0 - 3	3 - 6	6 - 9	9 - 12	1	2 - 4	5 - 15
Vaccinations	1	-	-	-	46	43	4
Re - vaccinations					-	-	4

HOSPITAL STATISTICS.

I am grateful to the Mid-Wilts. Hospital Management Committee for the following statistics for Malmesbury Hospital during 1970:-

MALMESBURY HOSPITAL.

BEDS.		Number of beds	30
		Average daily number of beds occupied	20.73
		Average duration of stay in days:	
		Acute	13.45
		Maternity	7.46
		Highest daily occupation during year	29
		Lowest daily occupation during year	13
		Total patient days for year	7565
IN-PATIENTS.		Total admissions	668
		Total discharges (including deaths)	675
		Deaths	40
MATERNITY.		Number of cots	10
		Live births	173
		Still births	-
		Neonatal deaths	-
		Maternal deaths	-
		Number of infants wholly breast-fed on discharge	63
		Patient days for year of infants in maternity wards	1366
OPERATIONS (including out-patients)		Major	5
		Intermediate	42
		Minor	450
		Total:	497
X-RAY		New out-patients	938
		Attendances: Out-patients	1064
		In-patients	70
PHYSIO-THERAPY	Individual Treatment	New out-patients	510
		New in-patients	117
		Attendances:	
		Out-patients	5147
		In-patients	821
	Group Exercises	New out-patients	59
		New in-patients	117
		Attendances:	
		Out-patients	223
		In-patients	699

MALMESBURY HOSPITAL.

IN-PATIENT ANALYSIS.

	Average Daily Number of Occupied Beds
General Surgery	1.52
Trau. and Orthopaedic	1.01
Gynaecology	0.92
General Practice Units:	
Maternity	4.09
Other Medical	12.75
Private Beds (S.1.)	0.02
(S.4.)	0.42
Total:	20.73

OUT-PATIENT ANALYSIS.

	New Patients	Attendances	No. of Clinics
General Medicine	89	232	25
Paediatrics	36	104	12
Dermatology	39	97	12
Neurology	56	120	12
General Surgery	209	393	28
E.N.T.	127	234	14
Trau. and Orthopaedic	231	676	43
Ophthalmology	63	204	21
Gynaecology	112	187	14
TOTAL CONSULTANTS' CLINICS	962	2247	181
CASUALTY DEPARTMENT	2901	4730	-
G.P. ANTE-NATAL CLINICS	207	1146	135

SEWERAGE AND SEWAGE DISPOSAL.

Once the Corston Sewerage Scheme has been completed the next main area for a sewerage scheme is Brinkworth.

WATER SUPPLIES.

The majority of the district is supplied by the North Wilts. Water Board. In the east there is a small area supplied by the Bristol Waterworks Company - a total of 736 houses.

I am grateful for the following report by the Engineer to the North Wilts. Water Board, Mr. C.R. Phillips.

The water supplies of the area of this Board have been satisfactory in quality and quantity.

Regular supervision of the quality of the water supplied is exercised by submitting, generally on a weekly basis, samples for bacteriological examination. During the year under review 1,512 samples from consumers' points of supply were examined; 1,428 were satisfactory for coli. counts of less than 1; 43 were reported to have coli. counts of 1 - 2; and 41 counts of 3 or more.

On the occasions when reports of coli. counts are received from the laboratory, investigations and repeated samplings are undertaken and continued until satisfactory reports are received.

Similar supervisory examinations are regularly carried out by sampling the untreated waters of the Board's sources, and the results obtained in the year under review are as follows:-

594 samples from raw water supplies were submitted:-

Excellent: coli. count of less than 1	455
Satisfactory: coli. count of 1 - 3	76
Suspicious: coli. count of 4 - 10	34
Unsatisfactory: coli. count of more than 10 ...	29
	594

Samples excellent and satisfactory - 89.4%.

Chlorination of all sources is practised with the aim of obtaining chlorine residuals at all consumers' points of supplies of between 0.1 and 0.3 p.p.m.

The Board continues to exercise supervision of the quality of raw water from all the sources by submitting samples to their Consultant Chemists, the Counties Public Health Laboratories, London, and any changes in chemical or mineralogical qualities of the water are reported upon by Mr. Gordon Miles, the principal of those laboratories.

Fluoride occurs naturally in quantities from 0.8 to 0.4 p.p.m. in the water obtained from the deep borehole sources in the limestone, but it is usually absent in the waters obtained from shallow wells and spring sources.

The Board is advised by its Consultant Chemists that all the water supplied are not plumbo-solvent.

The Board continues to make provision for increases in demand for water by seeking additional sources, and this work is being done in close co-operation with the River Authorities, whose statutory areas extend through the Board's area of supply.

The Public Health Department takes regular samples of water for bacteriological examination, and also tests for residual chlorine. Details will be found in the Chief Public Health Inspector's report.

OTHER PUBLIC HEALTH MATTERS.

Information required under the Food and Drugs Act 1955 and the Factories Act 1961 is given in the attached report of the Chief Public Health Inspector.

APPENDIX.

There follows my article which was published in the weekly medical journal "Medical Officer" (now named "Community Medicine") on 7th May, 1971.

PREVENTION OF HUMAN FASCIOLIASIS.

This paper suggests some practical ways to prevent the occurrence of human fascioliasis from eating infected wild watercress.

Ashton et al. (1970) reported 5 cases of human fascioliasis in Shropshire, and Harman et al. (1970) 44 cases in Monmouthshire/Gloucestershire. In both outbreaks the infestation was traced to wild watercress. In previous years cases have been reported from Hampshire, Kent and Scotland.

Cultivated watercress can be protected quite easily if the recommendations of the Working Party of the Public Health Laboratory Service on the Hygienic Production of Watercress (1966) are implemented. The main barriers to contamination of cultivated watercress beds are:-
(a) properly constructed beds; (b) an adequate and uncontaminated water supply; and (c) prevention, by means of adequate fencing, of access of cattle and sheep to the beds.

However, I should like to warn medical officers of health to check that these measures are being carried out, because the latest edition (1968) of the Ministry of Agriculture booklet on "Watercress Growing" does not mention the danger of liver fluke anywhere in its 35 pages.

Wild watercress is in many areas impossible to protect from infestation, but even so there are measures that can be taken to protect the public. Before discussing these it is necessary to consider some facts about the parasite and the eclolgy of the intermediate host.

Fasciola hepatica was named by Linnaeus in 1758. It is a trematode which is a parasite of cattle, sheep, and rabbits and has a world-wide distribution. The infected animal passes the egg in its faeces; this develops into a miracidium, which must find the intermediate host, the freshwater snail Lymnaea truncatula, for the life cycle to continue. The miracidium can travel up to two yards in moist conditions. In the snail it develops over a period of about two months and emerges in the form of free-living cercariae, which travel onto grass or waterside plants, where they encyst, surrounding themselves with a tough protective coat. If eaten by a mammalian host the immature fluke migrates through the intestinal wall to the liver. After growing in the liver tissue for some six weeks it settles in the biliary passages where four weeks later it becomes mature. The adult fluke can lay 20,000 eggs a day and a severely infected animal can contaminate the ground with up to six million eggs a day.

The snail Lymnaea truncatula is about ¼ inch long, and only multiplies in moist conditions. Mozley (1957) lists areas in which it is common as hoof prints near drinking places, on the banks of streams, along paths, especially where they cross streams, near springs, and along the course of seepages, also road-side ditches and any shallow depression in a pasture that is badly drained.

The snail is not usually found in clear running water, and watercress in this area is likely to be safe. However, I have found from my surveys that wild watercress spreads from the centre of streams to cover marshy areas near the banks, and I have found the snail in cattle hoof prints with watercress growing right alongside. It is these areas where the habitat of the snail and the marginal habitat of the watercress overlap that are potentially dangerous if cattle and sheep are present.

I am grateful to Dr. C.B. Ollerenshaw, Central Veterinary Laboratory, Weybridge, (personal communication) for the following information.

The greatest danger of infection is in autumn and winter. Fluke eggs hatching in June develop in the snail during July and August, and the cercariae emerge onto the herbage in September and October. In occasional years there is a danger of infection of herbage in early summer from snails infected in late summer and autumn of the previous year. There is no development of fluke eggs or of the infection and emergence of the parasite from the snail in temperatures below 10°C (50°F). This means that the fluke is "active" from May to October. Moisture is important to all stages of the parasite as well as to the snail, and, since moisture conditions vary enormously in habitats and are largely dependent on rainfall, it follows that one tends to get a high incidence of disease in wet summers and vice versa.

Once herbage (or watercress) is infected with the metacercariae then the infection persists for several months in winter (80% of metacercariae encysting in September will still be alive at the end of December) and several weeks in summer. Viable metacercariae on herbage have been recorded over a period of 51 weeks. There is no truth in any country lore that there are certain periods when it is safe to eat watercress, although it would be much safer to eat it in May, June and July, rather than in the autumn and early winter. Some farmers believe that frost kills off the metacercariae on herbage, but there is no truth in this. Temperature governs the development and emergence of the parasite from the snail, but once the herbage is infected then temperature has little immediate effect on viability.

Whilst washing of watercress will undoubtedly wash a few cysts off the herbage, it will not wash them all off. A standard technique when estimating the degree of herbage infection is to detach the cysts by washing the herbage in a liquidizer. This is very vigorous agitation and does not leave watercress in an acceptable condition for eating. The cyst wall is very resistant. Metacercariae in cysts will survive immersion in formalin for some little time and Dr. Ollerenshaw doubts whether there is any prospect of eliminating cysts once the watercress is infected.

Blamire et al. (1970) report that fascioliasis is the most common disease of cattle found at meat inspection. They state that over 700,000 bovine livers a year, worth over £1,000,000 are condemned in British slaughterhouses, and that the incidence is tending to rise. Figures from a local slaughterhouse for 1969 showed that 27% of cattle were infested with fascioliasis.

Since sheep die more readily of the disease than cattle, farmers tend to dose their sheep more frequently to try and control the disease. In cattle it is a milder disease, and may not be detected until slaughter - at which time it is the butcher who bears the loss and not the farmer.

Because the farmer may not know that his cattle have fascioliasis, any area of wild watercress to which cattle have access, and where the snail Lymnaea truncatula is present, should be regarded as potentially dangerous. For this reason I consider that the first step in prevention is for the District Medical Officer of Health to survey all areas of wild watercress in his District. In my area I was surprised to find that it was present in so many places.

The information can be obtained from health inspectors and councillors. In these days of specialization I suppose it would be possible to call in an expert to look for the snail, but in my case the prospect of some pleasant country walks was inviting, so, armed with a pair of gum boots and a plastic bag in which to put the snails, I set off to investigate. I had no difficulty in finding snails in muddy hoof prints and on banks near watercress. They are very small, so good eyesight and some patience is required. An excellent book with good illustrations of the snail is "Liver Fluke Snails in Britain" by Alan Mozley, published by H.K. Lewis & Company, London. The snails were sent to the Zoology Department of Bristol University for identification, but this can also be arranged by the local Public Health Laboratory. Snails are most plentiful in summer and autumn, so this is possibly the best time of year for a survey. In winter they go into hibernation until March or early April.

The first beneficial effect of a survey is that on reporting to the local council areas of wild watercress considered to be potentially dangerous, the local press will take up the story and give it publicity. At the same time they should be informed that cultivated watercress sold in the shops is perfectly safe to eat. In this area the subject was also reported on the local television and radio news services. It is worth repeating (Communicable Disease Report 69/25) that in 1969 a resident of Wiltshire, who had eaten some infested watercress on a visit to Gloucestershire in 1968, saw a television programme on which the outbreak in Gloucestershire was being discussed, and was able to diagnose his illness.

In two areas in which I found the snail Lymnaea truncatula in cattle hoof prints next to wild watercress, I learned later from councillors that, in previous years, not only was this watercress eaten by some people locally, but that it was gathered and sold in small grocers' shops. Health inspectors should, therefore visit shops and check that they only buy cultivated watercress from approved sources. It is a mistake to think that wild watercress must be poor in quality; I have found it wild in two places where it was as lush and large-leaved as the cultivated variety.

Apart from publicity and warning local shop-keepers, it is possible to consider further measures to protect the uninformed members of the public.

The survey will have revealed the following categories of watercress:-

(1) Watercress unable to be infested, either because the habitat is unsuitable for the snail, or because the area is protected from live-stock.

(2) Watercress where the snail is present, but arrangements can be made for fencing off live-stock.

(3) Watercress where both the snail and live-stock are present together.

With regard to the last two categories, no action can be taken without the full agreement of the landowner. In most cases this will be a farmer, and he will be most concerned with the health of his live-stock. It is useful to obtain two free leaflets to give him, which give a complete account of liver fluke and how it can be controlled. They are Shellstar Agricultural leaflet F.2 and Frescon is No Fluke obtainable from Shellstar Limited Ince Marshes, Ince, Chester CH2 4LB. This company sell a new molluscicide, "Frescon", which is harmless to live-stock. The Ministry of Agriculture have an Advisory Leaflet No. 310 which can be purchased from HMSO, which gives full information about the disease, but the leaflet was published in 1966 and the chemicals recommended are toxic to live-stock.

As I did not wish to appear to be advocating the product of only one company, I enquired from the Pesticides Branch of the Ministry of Agriculture whether any other firm markets a product similar to "Frescon" and was informed that none does. There are other molluscicides available, such as Metaldehyde (Murphy Chemical Company, Boots, May & Baker Limited) and Methiocarb (Baywood Company, Boots, Pan Britannica Company), but both of these are of higher toxicity.

If the farmer is concerned about liver fluke in his stock he might either use a molluscicide, or in suitable cases fence off the stream if he is persuaded that this could be a danger spot for his live-stock.

District councils are used to buying chemicals to kill rats and mice, and disinfectants and insecticides for use in homes and on rubbish tips. These chemicals are all used to control vectors of disease, so they might be persuaded to buy a molluscicide or herbicide in suitable circumstances. However, the views of the Pollution Officer of the local River Authority must be taken into account. In this area the Pollution Officer has no objection to spraying "Frescon" on land, but is not keen on its being sprayed near the water's edge as it is toxic to fish. He would, however, approve the use of "Aquacide", an officially approved Chipman Chemical Company formulation of diquat, for killing off the wild watercress. This would be preferable to removing the watercress by hand, for which labour is unlikely to be available. If either "Frescon" or "Aquacide" is considered for use, the consent of the owner of the land must first be obtained.

Probably the simplest answer in areas which the public frequent is to get the Council to agree to the erection of a notice-board - "Warning: Wild watercress may become infected with liver fluke". In all cases the permission of the interested farmers must be obtained. Another suggested wording for a notice-board is - "Warning: Wild watercress should not be collected from this area". My objection to this is that, like the notice "Keep off the grass", it may not only be ignored, but may draw attention to the watercress and actually provoke some people to gather it.

Although it may be impracticable to get prior permission from the dozens of landowners who may be involved when doing the initial surveys of areas of wild watercress, if a place is discovered that seems potentially dangerous to the public, and action is considered, such as informing the council (and thereby the press), it is courteous and politic to find out who the landowner is, and telephone to ask his permission to enter on his land. He is then more likely to be co-operative if further action such as the erection of a warning notice-board, is considered necessary

In the case of a notice-board the farmer should be asked to advise on the wording, as it is not the intention to advertise that the farm is "flukey" and his animals diseased. This might affect the prices of animals sold off the farm, and also the price or rent of the farm should it change hands. The farmer should be told about this possibility so that he can give this matter due thought. However, I have so far found farmers agreeable to the wording warning about liver fluke.

Finally, the Conchological Society of Great Britain and Ireland have members throughout the country who, I am sure, would be willing to help on anything to do with snails; in order to obtain the address of members living locally I suggest contacting the Secretary, Miss J. Sawyer, 58 Teignmouth Road, London, NW2.

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REPORT OF SURVEYOR AND CHIEF PUBLIC HEALTH INSPECTOR

FOR THE YEAR ENDING 31ST DECEMBER, 1970.

OFFICERS OF THE DEPARTMENT.

(As at 31st December, 1970).

R.S. Pierce	Surveyor and Chief Public Health Inspector.
R.T. Baynham	Senior Additional Public Health Inspector.
D. Peck	Additional Public Health Inspector.
M.H. Martin	Engineering Assistant.
B.W. Townsend	Building Inspector.
J. Kerslake	Clerk of Works.
J.H. Humphreys (Mrs)	Housing Management Assistant. (Part time).
E.M. Boulton (Mrs)	Shorthand Typist/Clerical Assistant.
P.A. Glass (Miss)	Shorthand Typist/Clerical Assistant.

HOUSING.

Council Houses.

The Council own:- Elderly persons' grouped dwellings comprising 26 bungalows, warden's flat and communal rooms.

Other dwellings:-

28	1	bedroomed	bungalows
104	2	"	"
25	2	"	houses
442	3	"	"
10	4	"	"
609			

29 families were rehoused in existing Council houses through changes of tenancy during the year.

All applicants for Council houses who either live or work in the Rural District are registered without any waiting period or immediate investigation of their circumstances.

The number of such applicants at the end of the year was 217.

A considerable number of these applicants are persons who live outside but work in the District and would like to move nearer to their work. It is also found on investigation that while many people would like to rent a Council house and apply accordingly, the number in actual need of alternative accommodation is very much smaller.

As many repairs as possible are carried out by direct labour but most exterior painting is being carried out by Contract. Some years ago a programme was set by which all houses would be repainted externally every 5 years and this is now being achieved.

The average cost of repair of houses during 1969 was about £18.00 per house with an additional cost of approximately £4 per house for maintenance of sewage plants, management etc.

Up to the end of 1969, 138 of the Council's 164 pre-war houses had been improved by the provision of bathrooms, internal W.C.'s, hot water systems, etc., those outstanding being 8 at Wick Road, Oaksey, 10 at Sawyers Rise, Minety, 4 at St. John's, Dauntsey and 4 at Sopworth, the Oaksey and Minety houses having been held over pending the provision of main sewers. A scheme for the Wick Road houses has been prepared and it is hoped that the work will commence shortly.

The Council now own 113 garages for letting to tenants.

Private Enterprise Building.

The number of houses completed and in course of erection has remained almost constant.

Planning applications have remained about the same as last year.

Administration of Building Regulations, 1965.

No. of plans submitted for approval	230
No. of plans passed	230
No. of houses completed during the year	82
No. in course of erection	80
No. of inspections in connection therewith	2121

Town and Country Planning Act, 1962.

The Council continued to exercise the powers of delegation by the Wilts. County Council with regard to development control.

No. of applications for permission to develop	215
No. approved without conditions	118
No. approved with conditions	47
No. of applications withdrawn	11
No. of applications refused	39
No. of applications not yet determined	0
No. of inspections in connection therewith	410

Caravan Sites and Control of Development Act, 1960.

No new licences were issued during the year and at the end of the year there were 49 caravans on 10 licenced sites. The sites generally are satisfactory.

No. of inspections	28

Inspection of Dwellings.

No. of inspections of dwellings under Housing or Public Health Acts.	262
No. of dwellings found to be unfit for human habitation.	8
No. found to be not in all respects fit.	29
No. of dwellings repaired by informal action	44
No. of cases of statutory action	NIL
No. of houses demolished	3
No. of houses closed	NIL
No. of undertakings accepted	5
No. of overcrowded dwellings known at end of year.	NIL

Housing Act, 1969.
Improvement Grants.

The increased grant available has resulted in a large increase of the number of applications received and approved.

The summary is as follows:-

Discretionary Grants.

No. of applications approved	50
No. of applications withdrawn	-
No. of schemes completed	22
Average grant per dwelling	£723.00

Standard Grants.

No. of grants approved during the year		16
No. of amenities provided during the year -		
	Baths	12
	Basins	11
	Hot water supplies	13
	Water closets	17
	Foodstores	2
	Septic tanks	2
	Sinks	1
No. of inspections of grant aided premises		541

WATER.

During the year the following samples from main supplies were taken for bacteriological examination:-

Source.	No. of Samples.	Satisfactory.	Unsatisfactory.
Bristol Waterworks Main	12	12	-
Chelworth Main	14	13	1
North Wilts Water Board	52	50	2
Swindon Corporation Main	12	12	-
Westonbirt Main	12	12	-
Private Supplies	5	3	2
	107	102	5

No. of visits in connection therewith 125

SEWERS AND SEWAGE DISPOSAL.

As I have pointed out in previous reports, the installation of main water supplies throughout practically the whole of the District, and consequent increase in drainage makes the need for main sewerage schemes greater than ever.

The Council's policy has been to encourage house building by private enterprise and the improvement of older property by the installation of water closets and baths, the only possible drainage outfalls in many cases at present being cesspits or septic tanks. In areas with pervious subsoil, effluent disposal by soakage is reasonably efficient but in that part of the District with a clay or water-logged subsoil there are many cases of unauthorised discharge of septic tank effluents to ditches and watercourses which thereby become polluted and lead to complaints often from those persons responsible for the trouble.

The increasing use of detergents is making maintenance and effluent disposal even more difficult than in the past.

Until such time as sewage schemes can be provided, if houses are to be built or improved, the occupants must be prepared to accept a certain amount of incovenience in drainage disposal.

The Hullavington, Sherston and Great Somerford sewage disposal plants have been well maintained during the year and samples of effluent have been reported to be satisfactory.

Difficulty is being experienced in disposing of sludge from the works. Farmers appear to be growing more and more reluctant to take the sludge, even free of charge, and it is anticipated that disposal will become more difficult in the future.

The North Eastern Area Sewerage Scheme and works have been completed but the number of houses connected has been most disappointing particularly in those villages where local pressure for a sewerage scheme was greatest. It is hoped that the scheme for Corston will commence shortly and the Consulting Engineers have been instructed to prepare a scheme for Brinkworth.

REFUSE COLLECTION AND DISPOSAL.

Refuse is now collected weekly, by direct labour, over the whole of the Rural District.

More householders are realising the need to provide proper covered fly-proof dustbins but unsuitable containers such as sacks, cardboard boxes and old baths etc., continue to be used in some circumstances.

All of the refuse from the Rural District is now tipped at Little Somerford, which tip is also used by the Malmesbury Borough Council by agreement.

It was not possible to carry out a collection of bulky refuse with the Council's vehicles this year and a local scrap merchant carried out the collection, the Council providing some manual assistance.

It is estimated that approximately 2600 tons of refuse was collected and disposed of during the year, an average of about 14 cwt. per household, the lorries covering 21,559 miles.

EMPLOYMENT OF WORKMEN.

The Council now employ 14 workmen as follows:-

Housing maintenance and repair	4 full time and 1 part time.
Refuse collection and disposal	4 full time and 3 part time.
Sewage disposal	3 full time and 2 part time.
Housing management	2 part time.

Workmen engaged on sewage disposal and refuse collection are supplied with protective clothing for use in fine and wet weather and washing facilities have been provided on all the Council's vehicles. Toilet accommodation and washing facilities are provided for the use of the workmen at the Council's depot at Burton Hill.

The following vehicles are now being operated:-

2 25 cubic yard S. & D. refuse collection lorries.
2 vans - sewage disposal.
3 vans - housing repairs and maintenance.

PEST CONTROL.

Refuse tips and sewers have been treated for destruction of rodents as required. Private premises are treated without charge, on request.

No. of properties inspected for rodent infestations	109
No. of peoperties found to be infested and treated	101
Total number of visits in connection with pest control	203

INFECTIOUS DISEASE.

28 visits were made and the necessary action taken following reported cases of infectious disease.

NUISANCES.

Regular inspections have been made over the District to detect and deal with nuisances. It has not been necessary to recommend the Council to take statutory action in any case, all nuisances having been dealt with informally.

FOOD INSPECTION.

Meat and Other Foods.

The 3 butchers shops are clean and in good condition and there is 1 licenced slaughterhouse and three licensed slaughtermen. There are no poultry processing premises within the District.

All animals slaughtered in the District for human consumption were inspected and the table below shows the percentage of carcases found to be diseased.

The arrangements and management of the slaughterhouse are satisfactory. A total of 155lbs. of meat and offal at the slaughterhouse was found to be unfit for human consumption and condemned.

It is worthy of note that, for a further year, no carcases were found to be affected by Tuberculosis or Cysticerci.

No. of visits to slaughterhouse	47

Carcases inspected and condemned in whole or in part.

	Cattle excluding Cows.	Cows.	Calves.	Sheep and Lambs.	Pigs	Horses.
Number killed	51	NIL	NIL	NIL	14	NIL
Number inspected	51	NIL	NIL	NIL	14	NIL
All diseases except Tuberculosis and Cysticerci. Whole carcases condemned.	NIL	NIL	NIL	NIL	NIL	NIL
Carcases of which some part or organ was condemned.	14	NIL	NIL	NIL	NIL	NIL
% of the number inspected affected with disease other than Tuberculosis or Cysticerci.	29.4	NIL	NIL	NIL	NIL	NIL

Milk.

The Wilts. County Council delegated to the Council certain powers and duties under the Milk (Special Designation) Regulations, 1963, as amended.

30 samples of heat treated milk were taken during the year and tested for keeping quality and satisfactory heat treatment and 13 samples of untreated milk were tested for keeping quality. 1 of the untreated samples failed the prescribed test (methylene blue test) and the necessary action was taken. The remainder of the samples were satisfactory. 4 untreated samples were also submitted for biological examination and these were all satisfactory.

Total number of licensed distributors	9
No. of distributors licensed to sell pasteurised milk	5
No. of distributors licensed to sell U.H.T. milk	5
No. of producer/retailers and distributors licensed to sell untreated milk	4
No. of inspections of premises	42

The trend towards heat treated milk continues and is to be encouraged and in fact only one small producer/retailer is selling untreated milk at present.

Bakehouses.

The only bakehouse in the District is satisfactory.

Ice-cream.

No ice-cream is manufactured in the District, and all sold is prepacked by by the makers.

No. of premises registered for the sale of ice-cream	48
No. of inspections	20

Public Houses.

Progress continues to be made in the provision of adequate sanitary conveniences and cleansing facilities in public houses, and most are now satisfactory.

No. of inspections	19

Food Hygiene Regulations.

The mobile vehicles operating in the District are generally satisfactory and only relatively minor infringements of the Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations have been found. These have been dealt with informally.

No. of inspections of mobile food vehicles	16

All premises in the District used for the sale of food are generally in good condition and well maintained. Any improvements necessary to comply with the Regulations have been carried out without resort to legal proceedings.

Schedule of Food Premises in the District.

	Number	Number fitted to comply with Regulation 16	Number to which Regulation 19 applies	Number fitted to comply with Regulation 19	No. of Inspns.
Butchers	3	3	3	3	8
Grocers (including General Stores)	33	33	24	24	29
Bakers	1	1	1	1	3
Public Houses	29	29	29	28	19
Restaurants and Canteens	8	8	8	8	20
	74	74	65	64	79

The Liquid Egg (Pasteurisation) Regulations, 1963.

There are no egg pasteurisation plants in the District.

THE DISEASES OF ANIMALS (WASTE FOODS) ORDER, 1957.

Only one premises in the District is now registered under the above Order, and this is satisfactory.

No. of visits	3

STORAGE OF PETROLEUM SPIRIT.

All premises licensed for the storage of petroleum spirit and mixture are satisfactory.

No. of premises licensed	66
No. of inspections	98

SCRAP METAL DEALERS ACT, 1964.

This Act requires Local Authorities to maintain a register of scrap metal dealers.

No. of dealers registered or whose registration was renewed during the year	2
Total number of registered dealers at the end of the year	13
No. of visits in connection with registration	14

ANIMAL BOARDING ESTABLISHMENTS ACT, 1963.

All premises licensed for the boarding of animals under the above Act are generally satisfactory.

No. of establishments licensed	6
No. of inspections	20

FACTORIES ACT, 1961.

Prescribed particulars on the administration of the Factories Act, 1961.

Part 1 of the Act.

1. Inspections for the purposes of provisions as to Health (including inspections made by Public Health Inspectors).

	No. on Register.	Inspns.	No. of Written Notices.	Prosecutions.
i) Factories in which Secs. 1, 2, 3, 4 and 6 are to be enforced by L.A's.	NIL	NIL	NIL	NIL
ii) Factories not included in (i) in which Sec. 7 is enforced by L.A's.	26	8	1	NIL
iii) Other premises in which Sec. 7 is enforced by the L.A. (excluding outworkers' premises).	NIL	NIL	NIL	NIL
	26	8	1	NIL

2. Cases in which DEFECTS were found.

Particulars. (1)	Number of cases in which defects were found				No. of Prosecutions. (6)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	Referred by H.M. Inspector. (5)	
Sanitary Conveniences (S.7)					
(a) Insufficient.	-	-	-	-	-
(b) Unsuitable or defective.	1	1	-	1	-
(c) Not separate for sexes.	-	-	-	-	-
	1	1	-	1	-

MALMESBURY RURAL DISTRICT COUNCIL.

OFFICES, SHOPS & RAILWAY PREMISES ACT, 1963.

Annual Report for the year ending 31st December, 1970.

Registrations and General Inspections (Table A).

Class of Premises. (1)	Number of premises registered during the year. (2)	Total number of registered premises at end of year. (3)	Number of registered premises receiving a general inspection during the year. (4)
Offices	-	9	2
Retail shops	3	11	7
Wholesale shops, warehouses	-	-	-
Catering establishments etc.	-	1	1
Fuel storage depots	-	-	-
Totals	3	21	10

Number of visits of all kinds by Inspectors to Registered Premises (Table B).

26

Analysis of persons employed in Registered Premises by workplace (Table C).

Class of workplace. (1)	No. of persons employed. (2)
Offices	27
Retail shops	25
Wholesale departments, warehouses	-
Catering establishments etc.	10
Canteens	-
Fuel storage depots	-
Total	62
Total males	20
Total females	42

Exemptions (Table D).

No applications for exemptions have been made under any Part of the Act during the year.

Number of exemptions current at 31st December: NIL.

Prosecutions (Table E).

No prosecutions have been instituted under any Part of the Act during the year.

Inspectors (Table F).

Number of Inspectors appointed under Section 52(1) or (5) of the Act: 3.

Number of other staff employed for most of their time on work in connection with the Act .. .. NIL.